

Fanshawe College

## FIRST: Fanshawe Innovation, Research, Scholarship, Teaching

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Documentation (Approvals etc...)

Electrical Engineering Technology (co-op / non  
co-op)

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2013

### ELY7 Curriculum Modification for 2014-15

Fanshawe College

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cae\\_appliedscienceandtech\\_electricalengtechnology\\_documentation](https://first.fanshawec.ca/cae_appliedscienceandtech_electricalengtechnology_documentation)

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# Request for Late Change to Degree Audit Form

FANSHAWE  
COLLEGE



Office of the Registrar  
[Rm. #E1012]

To the Division --

1. A copy of the Degree Audit Report (SDAR) with changes marked must accompany this request.
2. Please keep Yellow Copy of the Form and photocopy of SDAR Report with marked changes for your records
3. Allow 5 business days after receipt in the Office of the Registrar for the completion of this request.

To be completed by Division (please print)

Program # ELY7 Program Name Electrical Engineering Technology Date of Request (dd/mm/yyyy) June 12/13  
 Division MAN Program Co-ordinator Brad Smith Catalogs (To be updated – attach all copies) 2014/15 & on

Reason for late change:

In order to successfully transition this program to 15 week semesters we needed input from, & to consult with, several key partners including PCAT & AODA. As the PCAT didn't form until fall 2012, & they provided critical input, it was necessary to hold off submitting these changes until now.

The Alt. Semester Model team was also consulted during this process. There was no feedback provided by this team so the Electrical faculty team decided to go with the most common semester model (15 wks).

If the change is a correction to the Degree Audit, identify the impact on current students (please review and submit student EVALS with submission to determine possible impact)

N/A

(attach sample EVALS)

Academic Manager Signature Signature for Fred Vorkanov Date (dd/mm/yyyy) June 19, 2013

I have read the reasons for the change and any possible impact. Permission is granted: ☐ Yes ☐ No

Vice-President Academic Signature \_\_\_\_\_ Date (dd/mm/yyyy) \_\_\_\_\_

Comments \_\_\_\_\_

## Registrar Office Use Only

APRS Updated: ☐ Initials: \_\_\_\_\_

Catalog(s) Updated: \_\_\_\_\_

EVAL printed: ☐ Initials: \_\_\_\_\_

Division Notified: ☐ Date: \_\_\_\_\_

Signed Copy Returned: ☐ Date: \_\_\_\_\_

**ELECTRICAL ENGINEERING TECHNOLOGY - EFFECTIVE FALL 2014**  
**ELY7 - Non-Coop**

PROGRAM LEVEL	SEMESTER	COURSE NUMBER	COURSE TITLE	THEORY HOURS PER WEEK	LAB HRS PER WEEK
ELY71	Fall	MATH-1188	Math 1	4	
		ELEC-1130	Electrical 1	4	2
		COMP-1471	Programming & Analytical Techniques	3	
		CADD-1072	Computer Aided Design	3	
		WRIT-1039	Reason & Writing	3	
		SKLS-1021	Applied Project		3
				17	5
ELY72	Winter	MATH-1189	Math II	4	
		ELEC-3068	Electrical II	3	2
		DIGL-1024	Digital Fundamentals	3	2
		ELNC-1107	Electronic Devices	4	2
		LAWS-1038	Laws, Ethics & Safety	3	
				17	6
ELY73a	Summer	CNTL-1015	Automation	4	4
	May/June	ELEC-1133	Applied Electrical Code	5	
		ELEC-1131	Electrical Machines	3	2
		Gen-Ed	Online Gen Ed	6	
			<b>COMPRESSED HOURS</b>	18	6
ELY74	Fall	MATH-3074	Math III	4	
		TELE-1022	Telecommunications	3	2
		ELEC-3069	Electrical Machines II	3	2
		DIGL-3024	Microcontrollers	3	2
		MGMT-1007	Project Management	3	
				16	6
ELY75	Winter	MATH-5020	Math IV	4	
		ELEC-1132	Electrical Systems Design (E-Code)	4	2
		CNTL-5015	Advanced PLC Applications	3	2
		ELNC-3035	Power Electronics	3	2
		ELEC-3070	Electrical Power Systems	4	
				18	6
ELY73b	Summer	TELE-3013	Structured Cabling	2	2
	May/June	MGMT-3076	Capstone Project I	2	
		INST-1009	Instrumentation	2	2
		Gen-Ed	Online Gen Ed	6	
			Tech Option I	6	
			Choose one tech option from:		
			CNTL-3017 Industrial Robots OR		
			ELEC-3071 Automation System Design OR		
			CNTL-3018 Circuit Design & Fabrication		
			<b>COMPRESSED HOURS</b>	18	4
ELY76		CNTL-1016	Introduction to Process Control	4	2
		METH-3025	Quality Assurance	3	
			Tech Option II	3	2
			Choose one tech option II from:		
			TELE-5008 ADV Telecommunications OR		
			CNTL-3019 Variable Speed Drives		
			Tech Option III	3	2
			Choose one tech option III from:		
			COMP-3099 Embedded Systems OR		
			ELEC-3072 Renewable Energy		
		MGMT-5078	Capstone Project II	3	
		COMM-3070	Technical Comm for Technologists	2	
				18	6
<b>ELECTRICAL ENGINEERING TECHNOLOGY DIPLOMA ISSUED</b>					

330

GM  
345

7 weeks  
GE  
161

GM  
330


360

GE  
17 weeks

154.

360

th  
2040 June  
25/13

Greg Hesse for Fred Korkaris June 19, 2013  


## Degree Audit Report

Catalog: 2014/2015

Program: ELY7

Name: Electrical Engineering Technology

Department: MAN - Applied Science and Technology

Academic Level: PS

CCD: 9 - 6AcadSem/1800-2100hrs

Credential: Ontario College Advanced Dipl

Grade Scheme: LG2

Major: ELY7 - Electrical Eng Technology

Div: MAN - Manufacturing Sciences Division

Co-Op Indicator: N/A

## Academic Program Requirement

Total Credits: 121.50

Residency Reqmt: 31.00

GPA Requirement: 2.000

Residency Reqmt GPA: 2.000

Minimum Grade: D

## Academic Requirement: ELY7.14 Electrical Engineering Technology

Major: ELY7

Grade Scheme: LG2

Minimum GPA: 2.000

Minimum Grade:

## Subrequirement: Level 1

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
MATH-1188	Math 1	60.00	4.00	
ELEC-1130	DC Electricity	90.00	5.00	
COMP-1471	Programming & Analytical Techniques	45.00	3.00	
CADD-1072	Computer Aided Design	45.00	3.00	
WRIT-1039	Reason & Writing 1-Technology	45.00	3.00	
SKLS-1021	Applied Project	45.00	1.50	

## Subrequirement: Level 2

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
MATH-1189	Calculus 1	60.00	4.00	
ELEC-3068	AC Electricity	75.00	4.00	
DIGL-1024	Digital 1-Fundamentals	75.00	4.00	
ELNC-1107	Electronic Devices	90.00	5.00	
LAWS-1038	Law, Ethics & Occupational H&S	45.00	3.00	**

## Subrequirement: Level 3

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

		Total Hours	Total Credits	GE
CNTL-1015	Automation	60.00	3.00	
ELEC-1133	Applied Electrical Code	38.00	1.50	
ELEC-1131	Electrical Machines 1	53.00	3.50	

## Subrequirement: Level 4

Take all of the following Mandatory Courses:

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		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
MATH-3074	Calculus 2	60.00	4.00	
TELE-1022	Telecommunications	75.00	4.00	
ELEC-3069	Electrical Machines 2	75.00	4.00	
DIGL-3024	Digital 2-Digital Systems	75.00	4.00	
MGMT-1007	Project Management	45.00	3.00	**

**Subrequirement: Level 5**

Take all of the following Mandatory Courses:

		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
MATH-5020	Calculus 3	60.00	4.00	
ELEC-1132	Electrical Systems Design E-Code	90.00	5.00	
CNTL-5015	PLC Applications-Adv	75.00	4.00	
ELNC-3035	Power Electronics	75.00	4.00	
ELEC-3070	Electrical Power Systems	60.00	4.00	

**Subrequirement: Level 6**

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

Group 1

		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
TELE-3013	Structured Cabling	30.00	1.50	
MGMT-3076	Capstone 1 Electrical Technology	15.00	1.00	
INST-1009	Instrumentation	30.00	1.50	

Group 2

Take CNTL-3017, ELEC-3071 or CNTL-3018

		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
CNTL-3017	Industrial Robots	45.00	3.00	
ELEC-3071	Renewable Energy	45.00	3.00	
CNTL-3018	Circuit Design & Fabrications	45.00	3.00	

**Subrequirement: Level 7**

Take all of the following Mandatory Courses:

Group 1

		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
CNTL-1016	Process Control-Intro	90.00	5.00	
METH-3025	Quality Assurance	45.00	3.00	
MGMT-5078	Capstone 2 Electrical Technology	45.00	3.00	
COMM-3070	Technical Comm for Technologists	30.00	2.00	

Group 2

Take TELE-5008 or CNTL-3019

		<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
TELE-5008	Telecommunications-Adv	75.00	4.00	
CNTL-3019	Integrated Automation Systems	75.00	4.00	

Group 3

Take COMP-3099 or ELEC-3072

<b>Total Hours</b>	<b>Total Credits</b>	<b>GE</b>
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		<b>Hours</b>	<b>Credits</b>
COMP-3099	Embedded Systems	75.00	4.00
ELEC-3072	Variable Frequency Drive	75.00	4.00

**Subrequirement:** Gen Ed - Electives

Take 6 General Education Credits -

Normally taken in Levels 3 and 6

**Subrequirement:** Program Residency

Students must complete a minimum of 31 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

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 Approved By Chair/Manager:

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 Department and Date:

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 Approved by Dean:

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 Date:

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 General Education Approved By(as appropriate):

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 Date:

## PROGRAM/CURRICULUM "RATIONALE FOR CHANGES"

All requests for changes to programs of instruction must be submitted to the Registrar's Office by December 1st each year for changes to be implemented for the following September intake. All changes require the approval of the Dean and possibly the VPA's Office, if significant.

REMINDER: We need to ensure that changes are made properly and in a timely manner to: maximize student success; optimize employment preparation; meet all quality and integrity responsibilities to MTCU, PQAPA and our Board of Governors; and meet community expectations.

- The **Program/Curriculum "Rationale for Changes"** should be completed using this template and all areas must be completed. An electronic copy of this document should be submitted to the Registrar's Office.
- The Dean/Chair responsible for the program should consult with other affected schools and obtain the appropriate sign-offs on a paper copy of this document. Once all consultations and sign-offs have occurred, the paper copy should be submitted to the RO
- Course Request Forms must also be submitted electronically to Strategy and Planning for all new courses. These will be forwarded to Scheduling following approval of the changes by the Dean and possibly the VPA's Office.

### 1.0 Program Requiring Changes

Program Title:	Electrical Engineering Technology	
Program Alpha & Number:	ELY7	
Effective Catalog Year:	<del>2013/14</del> 2014/15	

*Please answer each of the questions below, if applicable. Missing or incomplete information may delay approval and/or implementation of the proposed changes.*

### 2.0 Rationale for Changes

#### 2.01 Provide a brief description of the reasons for the proposed changes.

The transition to a 15 week semester (from an 18 week semester) is being made to once again align our semester model with the college semester model. This will improve student retention by reducing weekly contact hours, and allowing more time for studying, projects, etc.

#### 2.02 Students

- Are changes a response to student feedback? Or our Programs Data Report - Weak Factors? (summarize how changes address this issue)  
**These changes are in response to student feedback. Students have asked for less contact hours per week.**
- How will changes affect student learning and success? (describe evidence to support this)  
**Less student contact hours per week will allow for more study time and more time to work on projects, assignments, etc. It will also allow for more job opportunities as the diploma will**



now be accepted in the US for work permits, and will be more widely recognized by employers.

- How will changes affect cost of the program for students? (e.g., materials fees; equipment fees - laptop program; OSAP implications)  
The total cost is the same, however the per-semester cost is lower.
- How will changes affect the flow of the program?  
We are aligning the semesters to the college model, which means we will be in line with services offered in the college. In addition, the issue of the shortened Christmas break will be resolved. This will be especially important to international students who will now be able to travel of the Christmas holidays.

## 2.03 Relationship of Program to Industry

- How do changes reflect trends in the field or in industry? (Provide data regarding industry and/or professional trends.)
  1. Newly created electives allow students choices that map to industry needs
  2. Realignment of semesters allows the opportunity to address concerns raised during a recent program review
  3. PCAT has been consulted regarding these changes
  4. Ongoing changes can be made after subsequent PCAT reviews
  5. There will be official recognition of the credentials by certifying bodies and key employers
  6. Credentials will now be accepted by the US for work permit purposes
  7. The length of coop work terms will better align with industry needs

## 2.04 Program Learning Outcomes

- How do the changes align with Ministry outcomes? (Provide a copy of the completed program map indicating gaps/overlaps that are being corrected)  
In Fall 2013, in consultation with the CAE, program mapping will be completed (vacation schedules are making it next to impossible to meet prior to then as we need everyone's input). We will ensure changes align with Ministry outcomes.

## 2.05 Relationships with Other Fanshawe College Programs

- Is this course in a ladder program or part of any other Fanshawe College program?  
Based on MTCU standards and learning outcomes, there are too many differences between the technician level and technology level to allow for laddering.

## 2.06 Relations with Other Post-Secondary Programs

- How will the changes affect transfer agreements with other post-secondary institutions?  
The proposed DA changes will provide for better alignment between the two institutions
- What discussions have been initiated with these institutions regarding the changes?  
Fred Varkaris, Acting Chair for AST, has been in touch with Lakehead to discuss the changes.

## 2.07 Changes on Fit of Program with general College Requirements for Programs

- How do changes affect the fit of the program with the College's strategic plan, program mix, general education requirements, marketing?  
It is a better fit as it aligns with the college's student centered approach.
- Are changes consistent with Colleges policies/practices? (Identify specific areas where policies/practices need to be altered if program changes approved.)  
Yes, the changes are consistent with college policies and practices.

## 3.0 Consultation Regarding Proposed Changes

### 3.01 Consultation With Program Advisory Committee

- Indicate feedback from the program advisory committee regarding the changes.  
The PAC recommended the following skills:
  - AutoCAD/3D knowledge
  - SolidWorks & circuit board design



- High-level language programming and coding
- Report writing skills

The PAC concurred that the new program model for ELY is preferred over the current model, with coop for ELY being offered toward the end (instead of the middle where it currently resides). It will give students field experience and a higher level of knowledge entering their coop which in turn provides ore value to the companies.

### 3.02 Consultation With Other Programs/Schools/Services

- What programs/schools/services have been consulted?  
SLLS, CAE, Coop and other programs within AST have been consulted.
- What feedback and suggestions have been offered through consultation?  
All feedback and suggestions have been given due consideration.

## 4.0 Resource Implications of Proposed Changes

### 4.01 Staffing

- Outline all staffing consequences, both for the program and related areas.  
There are no staffing consequences.

### 4.02 Services

- Outline all consequences on other areas.  
There are no consequences for other areas.

### 4.03 Space or Technology Requirements

- Outline how changes affect space and/or technology requirements.  
Space and/or technology requirements are not affected by the proposed changes.

### 4.04 Budgetary Implications

- Outline budgetary implications (include consequences on other schools such as increase/decrease in teaching hours required)  
There are no budgetary implications.
- Outline changes to materials fees.  
There are no changes to materials fees.

Approvals: Chair of School and Dean of Faculty; possibly VPA's Office, if significant

☒ Approved

☐ Not Approved / Requires Changes

*Greg Kassin for Fred Verkaris*  
Chair of School/Campus (signature)

*June 19, 2013*  
Date

*[Signature]*  
Dean of Faculty (signature)

*June 19/13*  
Date

Chair of Servicing School, if required (signature)

Date

Vice-President, Academic, if required (signature)

Date

## Proposed DA Changes – Advanced Diploma Assessment

Program Name: Electrical Engineering Technology

Previous Program Code (if applicable): ELY4

New program Code: ELY 7

Criteria	Requirement	Assessment	Requirement Met Yes / N
Total Program Hours	1800-2100	2040	yes
Number General Education Courses Required	4	4	yes
General Education Mandatory Courses (max)	2	2	yes
General Education Elective Courses (min)	2	2	yes
WRIT	WRIT 1	WRIT 1039	yes
Advanced COMM course	recommended	COMM 3070	yes

Date Completed: June 24/2013

Completed By: 